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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/646,816	09/22/2000	Klaus Abend	00-587	1570

7590 12/21/2004  
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EXAMINER

KIBLER, VIRGINIA M

ART UNIT PAPER NUMBER

2623

DATE MAILED: 12/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/646,816

Applicant(s)

ABEND, KLAUS

Examiner

Virginia M Kibler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 16-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendment received on 8/12/04 has been entered. Claims 16-21 remain pending.

### ***Claim Objections***

2. Claims 16-21 are objected to because of the following informalities: “paragraph (3)” should be changed to “step (c)” in claim 16, line 8; “paragraph (5)” should be changed to “step (e)” in claim 16, line 11; and “store reference values” should be changed to “stored reference values” in claim 16, line 12.

Claims 17-21 depend on claim 16, and are thereby objected to.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 16, 17, and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16 recites the limitations “the recording R<sub>1</sub>” in line 8 and “the recording R<sub>2</sub>” in line

11. There are insufficient antecedent bases for these limitations in the claim.

Claim 17 recites the limitations "the selection" in lines 3-4 and "the indication of crack faults" in line 3. There are insufficient antecedent bases for these limitations in the claim.

Claim 20 recites the limitation "the prescribed threshold values" in 6-7. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gorria et al. (5,408,104) in view of Gillard et al. (5,570,431).

Regarding claim 16, Gorria et al. ("Gorria") discloses determining the acceptability of a workpiece comprising the steps of providing a workpiece (Abstract); recording the workpiece at area A<sub>1</sub> ("niv i") at time T<sub>1</sub> (R<sub>1</sub>) (Col. 2, lines 23-55; Col. 8, lines 38-51); storing the recording R<sub>1</sub>(Table I-III); recording the workpiece at area A<sub>1</sub> at time T<sub>2</sub> (R<sub>2</sub>) (Col. 2, lines 23-55; Col. 8, lines 38-51); storing R<sub>2</sub> (Table I-III); comparing R<sub>1</sub> and R<sub>2</sub> to determine a difference D at area A<sub>1</sub> for the time period T<sub>2</sub> – T<sub>1</sub> (Col. 2, lines 56-68, Col. 3, lines 1-16); and comparing D to stored reference values to determine the acceptability of the workpiece (Col. 6, lines 16-23; Col. 11, lines 56-67). Gorria discloses detecting cracks by measuring appearance of colored stains or a noticeable change in color (Col. 1, lines 24-48), but does not specify using the dye penetrant method. However, Gillard et al. ("Gillard") teaches that it is known to use the dye penetrant

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method including treatment with penetrating agent for automatic fault detection by applying a dye penetrant to a surface of a workpiece (Col. 1, lines 18-56). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the crack detection method disclosed by Gorria to include the dye penetrant method as taught by Gillard because it is well known in the art in order to provide a high contrast between crack indication and the article surface (Col. 3, lines 54-63).

Regarding claim 17, Gorria discloses setting windows and scanning the windows by means of the image recording device (Col. 12, lines 39-53), the selection and evaluation and indication of crack faults being automatically linked with the test sequence (Col. 11, lines 49-68) and the data obtained being processed in a computer (Col. 8, lines 9-31).

Regarding claim 18, Gorria discloses the image recording device produces recordings at time intervals (Col. 4, lines 16-24).

Regarding claim 19, Gorria discloses means of a conveying device, the workpiece 1 is lead with the same physical orientation (Figure 1) past at least two recording devices arranged at a distance from one another (Col. 7, lines 32-46), so that recordings made by the various image recording devices of the workpiece with a constant physical orientation but at different times are produced and the recordings from the various recording devices are compared with one another by evaluation logic and the differences between the recordings, signals are formed on the basis of the time intervals that have elapsed between the recordings (Col. 8, lines 38-51).

Regarding claim 20, Gorria discloses reference data for the image changes and data relating to the time difference between the respective time periods that have elapsed between the recordings are stored in the memory of the evaluation logic (Col. 6, lines 8-25), and the

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evaluation logic makes a comparison to see whether the measured difference values are within the prescribed threshold values and accordingly signals are output which represent only the faults within a predetermined time interval (Col. 11, lines 56-68).

Regarding claim 21, Gorria discloses monitoring constituent parts and parameters of the system (Col. 7, lines 24-36; Col. 5, lines 1-13) at predetermined time intervals by monitoring units and monitoring signals are output, which are checked by the measured-value processing unit and accordingly, signals are output (Col. 8, lines 1-8).

### ***Response to Arguments***

7. Applicant's arguments filed 8/12/04 have been fully considered but they are not persuasive.

Summary of Applicant's Argument: Gorria does not teach making recordings of the same area of the workpiece over time. Gillard does not suggest recording different images of the same area over time as taught in the method of the present invention.

Examiner's Response: Gorria discloses recording at an area  $A_1$  at successive exposure times such as  $t_1$  and  $t_2$  (Col. 8, lines 38-51; Col. 11, lines 24-55). Therefore, Gorria discloses recording the workpiece at area  $A_1$  at time  $T_1$  and  $T_2$  as claimed. Gillard is not relied on for teaching recording different images of the same area over time.

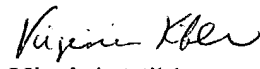
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***Contact Information***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Virginia M Kibler whose telephone number is (703) 306-4072. The examiner can normally be reached on Mon-Thurs 8:00 - 5:30 and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Virginia Kibler can be reached on (703) 306-4072. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Virginia Kibler  
12/19/04

MEHROOZ DASTOURI  
PRIMARY EXAMINER

